

JUNE 2005

PRIMEFACT 9, (REPLACES FISHNOTE NSWF1081)

Threatened species in NSW

Macquarie perch

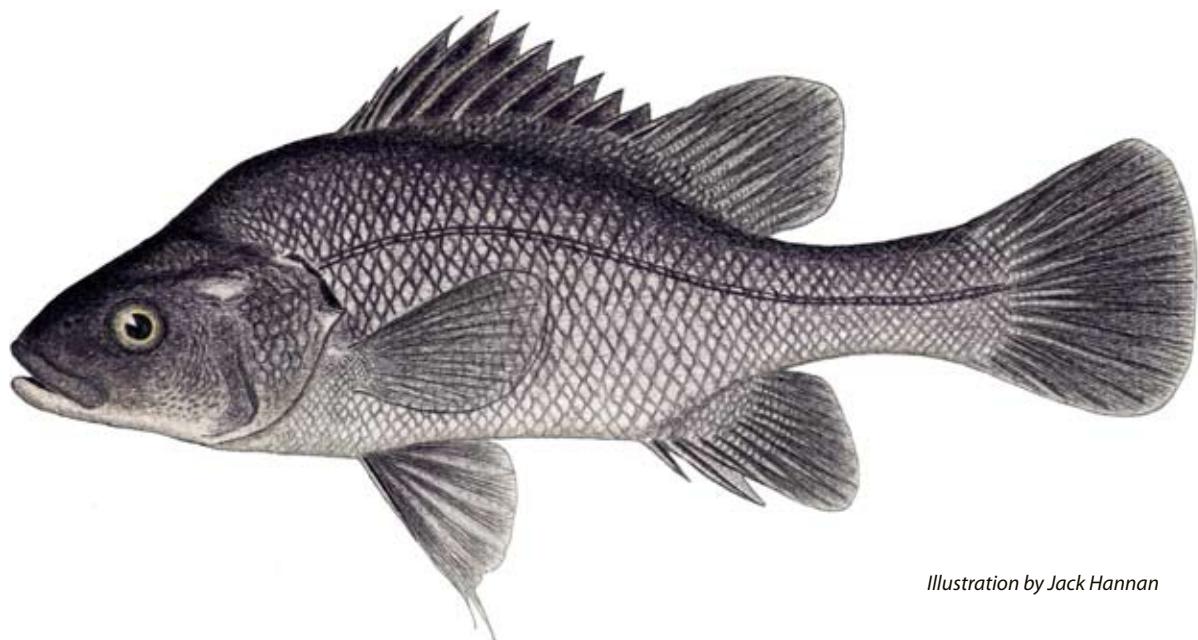
Macquaria australasica

Illustration by Jack Hannan

INTRODUCTION

Macquarie perch are also known as mountain perch, Murray perch, black bream, silver-eye or white-eye. They are found in the Murray-Darling Basin (particularly upstream reaches) and parts of south-eastern coastal NSW, including the Hawkesbury and Shoalhaven catchments. The conservation status of the different populations is not well known, but there have been long-term declines in their abundance.

Macquarie perch are listed as a **vulnerable species** in NSW. There are heavy penalties for harming, possessing, buying or selling them, or for harming their habitat (see 'Legal Implications').

DESCRIPTION

Macquarie perch are an elongated, oval shaped fish with large eyes and a rounded tail. Some clear differences have been shown between

eastern (coastal) and western (Murray-Darling) populations, but so far they haven't been described as separate species.

Macquarie perch from the Murray-Darling Basin are larger, growing up to 46 cm and 3.5 kg (though they are more commonly less than 1.5 kg). They can be black, silver-grey, blue-grey or green-brown in colour, with a paler underside.

Macquarie perch from coastal catchments are distinctly smaller (usually less than 18 cm in length) and are blotched with grey-brown, buff and dark grey patches over the head and body.

HABITAT AND ECOLOGY

- Macquarie perch are found in both river and lake habitats, especially the upper reaches of rivers and their tributaries.
- They are quiet, furtive fish that feed on aquatic insects, crustaceans and molluscs.



NSW DEPARTMENT OF PRIMARY INDUSTRIES

- Sexual maturity occurs at two years for males and three years for females.
- Macquarie perch spawn in spring or summer in shallow upland streams or flowing parts of rivers.
- Females produce around 50,000-100,000 eggs which settle among stones and gravel of the stream or river bed.
- Macquarie perch have proven difficult to breed in captivity and a conservation stocking program does not appear to be feasible at this stage.

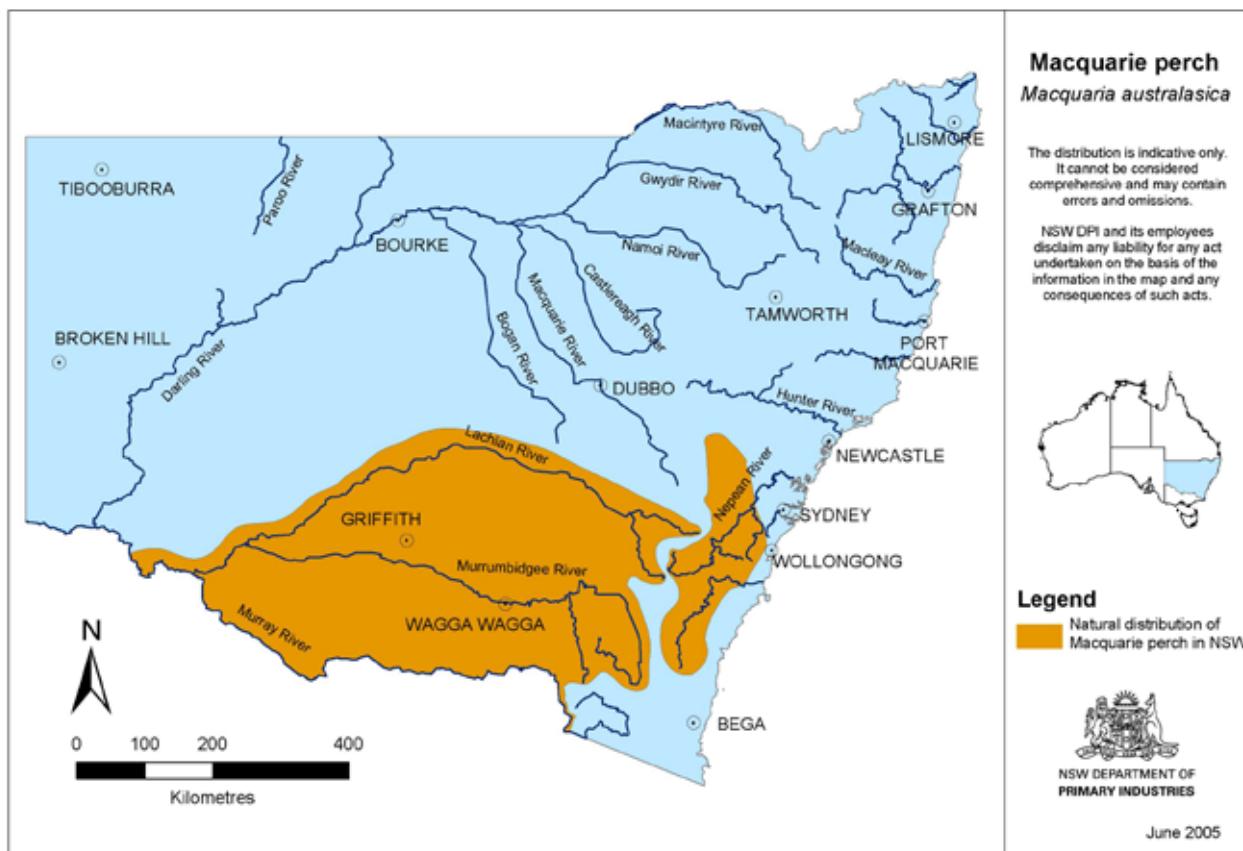
WHY ARE MACQUARIE PERCH THREATENED?

- Changes in water quality associated with agriculture and forestry. For example, siltation (as a result of clearing) can destroy the deep rock pools used by adults as well as smothering spawning areas.
- Modification of natural river flows and temperatures as a result of river regulation (construction of dams and weirs), leading to reduced opportunities for dispersal and reduced habitat quality.
- Spawning failures resulting from cold water releases from dams.
- Competition from introduced fish species such as trout and redfin perch.

- Diseases such as EHN (epizootic haematopoietic necrosis), which is carried by redfin perch.
- Over-fishing has probably contributed to past declines. Macquarie perch are now totally protected in NSW, but illegal fishing (and possibly hooking injuries in accidentally caught fish) still poses a threat.

CONSERVATION AND RECOVERY ACTIONS

- Allocate environmental water flows in regulated rivers to lessen the impacts of altered flow and temperature regimes.
- Prevent sedimentation and poor water quality by improving land management practices, conserving and restoring riparian (river bank) vegetation and using effective erosion control measures.
- Develop and implement control programs for introduced species.
- Protect genetically distinct populations of Macquarie perch by preventing their translocation and introduction into new waters.
- Ensure that all fish stocking activities within the natural distribution of Macquarie perch comply with the NSW Fish Stocking Fisheries Management Strategy.



Distribution of Macquarie perch in NSW.



Adult Macquarie perch. Photo: Gunther Schmida.

- Promote and implement the Hatchery Quality Assurance Program for fish breeding and stocking activities to reduce the risks of translocating pest species and diseases.
- Implement the Protected, Threatened and Pest Species Sighting Program: **Report any sightings of the species on the Department of Primary Industries' 24 hour automated message-taking service by calling (02) 4916 3877.**

LEGAL IMPLICATIONS

- It is illegal to catch and keep, buy, sell, possess or harm Macquarie perch (or any other threatened species in NSW) without a specific permit or licence, and significant penalties apply. For vulnerable species, these penalties can include fines of up to \$55,000 and up to 1 year in prison. There can also be significant penalties for causing damage to the habitat of a threatened species.
- Local councils, State government agencies and other consent or determining authorities must consider the impact of development proposals on any threatened species. Where there is likely to be a significant impact, a detailed species impact statement may be required.
- Recovery plans may be prepared for threatened species to identify actions and allocate responsibilities to recover the species to a position of viability in nature.

BIBLIOGRAPHY AND FURTHER READING

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FOR FURTHER INFORMATION

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